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2020

US287 Realignment

Jennifer B. Anderson

US287 Realignment

Archeological Survey Report

Project Name: US287 Realignment

From 348 feet south of 2nd street **To** 1.718 miles south

District(s): Childress

County(s): Hall

CSJ Number(s): 0042-09-124

Prinicipal Investigator and Firm/Organization: Jennifer B. Anderson

Antiquities Permit No. 9246

Report Completion Date: March 9, 2020

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-09-2019, and executed by FHWA and TxDOT.

Abstract

On behalf of the Texas Department of Transportation (TxDOT), AmaTerra Environmental, Inc. conducted an intensive archeological survey of six parcels (Parcels 1-6), measuring approximately 32 acres along US 287, in Memphis, Hall County, Texas. Work consisted of visual inspection of the entire project area and the excavation of 71 shovel tests. Fieldwork was conducted from March 2–4, 2020. Jennifer Anderson of TxDOT served as Principal Investigator, under Texas Antiquities Code Permit No. 9246.

No cultural material was encountered on the surface or in any of the subsurface tests; no new archeological sites were recorded. No further archeological work is recommended at any location within the six surveyed parcels. No artifacts were collected as part of this project. All notes and field records will be housed at AmaTerra Environmental, Inc.

Table of Contents

Project Information	
▪ **This survey is:**	☒ the initial survey for this project.
	☐ a continuation of previous survey(s) due to: ☐ access issues and/or ☐ design changes.
▪ **Report Completion Date:**	03/09/2020
▪ **Date(s) of Survey:**	03/02/2020 to 03/04/2020
▪ **Archeological Survey Type:**	☐ Reconnaissance ☒ Intensive
▪ **Report Version:**	☐ Draft ☒ Final
▪ **Regulatory Jurisdiction:**	☒ Federal ☒ State
▪ **District:**	Childress
▪ **County or Counties:**	Hall
▪ **USGS Quadrangle(s):**	Memphis, TX
▪ **Highway:**	US 287
▪ **CSJ Number(s):**	0042-09-124
▪ **Report Author(s) and Affiliation:**	Brittany S. McClain
▪ **Texas Antiquities Permit Number:**	9246
▪ **Estimated Percentage of Time that the Principal Investigator was in the Field:**	0

Project Description

▪ **Project Type:**	New Location Freeway
▪ **Total Project Acres:**	Unknown
▪ **Existing Right-of-Way (ROW) Acreage**	31 acres
▪ **New ROW Acreage**	32 acres
▪ **New Easement Acreage (includes temporary and permanent easements):**	0 acres
▪ **Survey Area**	32 acres
▪ **Project Description and Impacts**	
	The Childress District is proposing to realign and reconstruct US 287, from 348 feet south of 2nd Street south for 1.718 miles. The project will include bridge replacement, earthwork, road base, culvert construction and reconstruction, and surface treatment.

Area of Potential Effects and Survey Area

- **Area of Potential Effects (APE)**

  The APE is defined based on the most recent construction plans and schematics available at the time of execution.

  - Horizontal Limits:

    From: 348 feet south of 2nd street

    To: 1.718 miles to the south

  - Typical width of any existing ROW (if variable, provide upper and lower limits)

    150 feet

  - Typical width of entire ROW, including existing and proposed new ROW (if variable, provide upper and lower limits.)

    340 feet to 1000 feet

  - Typical depth of impacts:

    2 feet

  - Maximum depth of impacts:

    30 feet

- **No Survey Area**

  None of the existing ROW was surveyed due to extensive prior disturbances.

- **Access Denied Area:**

  N/A

- **Survey Area:**

  Parcel Number(s):

  Parcels 1-6 on design schematics provided by TxDOT

- **Project Area Ownership:**

  James W. Brumley, Don and Sandra Springer, City of Memphis Land, A. Gayle Gilreath, Daniel Castro, and Birdsong Corp.

Project Setting

- **Natural Setting**
  - - Topography:

    Topography consist of badlands, escarpments, and prominent buttes with islands of level land within the flat tablelands and valleys of the Southwestern Tablelands (Griffith et al. 2007). Elevation varies from 1400 to 2925 feet above mean sea level (**Figures 1 and 2**)

  - - Geology:

    The APE is predominately underlain by the Lingos Formation (Qli) of Phanerozoic Age in addition to Cloud Chief Gypsum and Whitehorse Sandstone, undivided (Pwh) of Permian Age (USGS 2020) (**Figure 3**).

  - - Soils:

    Soils in the APE consist of Carey loam (1 to 3 percent slopes), Quinlan-Woodward complex; St. Paul Silt loam (0 to 3 percent slopes); Weymouth loam (1 to 3 percent slopes); Weymouth loam (3 to 5 percent slopes); Woodward loam, warm (1 to 3 percent slopes); Woodward loam, warm (3 to 5 percent slopes); and Yomont very fine sandy loam, occasionally flooded (0 to 1 percent slopes). Soils identified within the APE are derived from loamy alluvium and/or residuum weathered from sandstone or siltstone, and calcareous loamy alluvium or silty alluvium. (USDA-NRCS 2020) (**Figure 4**).

  - - Historic Land Use:

    Historically, the land within and adjacent to the project area has been predominately rural and agricultural with minimal residential development until the mid-part of the twentieth century. A 1953 aerial photo of the project area shows few structures surrounding the US 287 corridor and within the APE (**Figure 5**). The 1963 historic topographic map identifies one structure located within the APE, and few sparse buildings to the north and south with a larger community located northwest of the APE (**Figure 6**).

  - - Land Use:

    Today the land within the APE consists of agricultural cropland (**Figure 7**), storage and staging areas for farm equipment (**Figure 8**), commercial lots, ROW for US 287 (**Figure 9**) and the Burlington Northern Santa Fe Railroad.

  - - Vegetation:

    Most of the APE is open cotton cropland with pockets of wetland areas surrounding Berkley Creek (**Figure 10**). Vegetation consists of yucca, ragweed, tumbleweeds, mesquite trees, secondary overgrowth (**Figure 11**), and mixed short to tall grasses (**Figure 12**).

  - - Estimated Ground Surface Visibility:

    Between 20 and 100%

- **Previous Investigations and Known Archeological Sites:**

Background research for this project consisted of an online records search through the Texas Historical Commission's (THC) Archeological Sites Atlas (Atlas 2020) and a review of historical

maps and aerial photographs. Research focused on the identification of archeological sites, State Antiquities Landmarks (SALs), Recorded Texas Historic Landmarks (RTHLs), sites listed on the National Register of Historic Places (NRHP), historical markers, cemeteries and previously conducted archeological surveys within a one-kilometer (0.62 miles) buffer surrounding the APE (**Figure 12**; Atlas 2020). The search identified two previous surveys and three archeological sites within the buffer.

Neither of the previously conducted surveys overlaps with the APE. Both surveys are located southwest of the project area. One survey was conducted in 1983 for the Heritage Conservation and Recreation Service and the other survey was conducted in 1997 for the City of Memphis.

The three previously recorded archeological sites within the buffer are 41HL9, 41HL71, and 41HL83. Site 41HL9 is a prehistoric open campsite recorded by David T. Hughes in 1983. Hughes recorded this site as approximately 400 meters (m) by 50 m in size and a likely single Archaic component. Cultural material within the site included quartzite boiling pebbles and hearthstones, one large flake gouge, hammerstones, and flakes. No eligibility recommendations for NRHP or a SAL were made for this site.

Site 41HL71 is a prehistoric burial site recorded by Matthew S. Taylor in 2009. Taylor recorded this site as a salvage excavation consisting of a single human burial feature. Human remains were identified eroding out of a cutbank during sand quarrying. The burial was heavily damaged from looting and past quarrying activities. Associated funerary objects identified with the individual include a conch shell gorget and 47 snail shell beads. This site was recommended not eligible for listing on the NRHP or for designation as a SAL due to very little remaining research value and the degree of site destruction.

Site 41HL83 is a historic jail recorded by William E. Moore in 2013. Moore recorded this site as approximately 703 square feet in size and constructed sometime between 1920 and 1931. This jail may have been built as a jail for chain gangs working on the road but is presently used as storage by the current owners. No eligibility recommendations for NRHP or a SAL were made for this site.

- **Evaluation of Project Setting:**

Most of the 32-acre survey area consists of plowed agricultural fields. The remaining parcels include commercial lots and land adjacent to US 287 and the Burlington Northern Santa Fe Railroad ROW. The existing ROW is entirely disturbed by road construction, bridge construction, utility lines, drainage ditches and rural commercial development. Various utilities parallel the south side of US 287, including buried communications lines. Overall the project area consists of disturbed areas with shallow clay soils or fill. The result is that the APE has a low potential to contain intact archeological deposits.

Survey Methods

- **Surveyors:**

  Brittany McClain and Noel Steinle

- **Description of Methods:**

  Survey efforts involved 100% pedestrian survey and subsurface investigations in the form of shovel testing to locate and identify, determine the nature, extent, and if possible, the significance of any archeological resources discovered in the APE. Shovel tests were distributed throughout the APE. Shovel tests were excavated in 20 cm arbitrary levels until sterile subsoil, compact clay, bedrock, or disturbed soils were encountered. All fill was screened through ¼-inch mesh hardware cloth. All shovel tests were mapped using a hand-held GPS unit and logged on digital and standardized forms that recorded profile characteristics, depth, and contents, if any (see Attachment A for shovel test log). Investigators took photographs of the landscape and various disturbances to document the APE setting. A total of 71 shovel tests were excavated (**Figures 14–16**)

- **Subsurface Probes**

Method	Quantity in Existing ROW	Quantity in Proposed New ROW	Quantity in Proposed New Easements	Total Number per Acre
Shovel Test Pits	0	71	N/A	2.22
Power Auger Probes	N/A	N/A	N/A	N/A
Mechanical Trenches/Scrapes	N/A	N/A	N/A	N/A

- **Other Methods:**

  None

- **Collection and Curation:** ☒ NO ☐ YES

- **Comments on Methods:**

  The survey methods used exceed those stipulated by the Council of Texas Archeologists (CTA), which call for one test every two acres for areal surveys, or one shovel test every 100 meters for linear projects. Shovel test rates for this project equal approximately 2.22 per acre.

Survey Results

- **Survey Area Description:**

  The survey area parallels US 287 as part of future construction improvements to the highway and consists of six parcels identified as needing survey. The APE measures approximately 32 acres of new ROW, based on project schematics provided by TxDOT, and consisted of an intensive pedestrian survey supplemented with shovel testing (**Figures 14–16**).

  The western terminus of the project area is situated between US 287 and the Burlington Northern Santa Fe Railroad ROW and exhibits terraforming, drainage ditch construction (**Figure 17**), asphalt spill-over due to railroad ROW maintenance (**Figure 18**), and disturbed, shallow soils. Approximately 300 m from the western terminus, the APE crosses over to the south side of US 287, towards a commercial complex with a paved asphalt road. The project area continues further east and declines in elevation towards Berkley Creek. Soils within this area were either heavily disturbed due to road terraforming and erosion (**Figure 19**) or inundated, such as those wetland environments noted around Berkley Creek.

  East of Berkley Creek, on top of an eroding terrace, investigators identified a deteriorating cattle pen and associated railroad train car. The train car was located within the proposed ROW within Parcel 3 owned by Don and Sandra Springer (**Figure 20**). The structures lie at the edge of a plowed agricultural cotton field on a terrace. The cattle pen is approximately 20 m by 15 m and is constructed of old fencing, wood slats, cattle panel and railroad ties (**Figures 21 and 22**). A hose bibb with a red handle is located within the middle of the cattle pen. No surface artifacts were observed through the tall grasses within the cattle pen area or within any nearby shovel tests.

  The old railroad train car lies approximately 10–15 m east of the cattle pen and has since been converted into a storage shed. The train car is approximately 6 feet wide and 15 feet long and is oriented north to south with the front of the train car facing east (**Figure 23**). It is constructed of vertical wood slats and metal ties. The inside of the train car contained spare car parts and other farm ephemera (**Figure 24**). The train car was once outfitted with electricity and hooked up to a water source as observed through remaining power lines and a water spigot to the south of the train car.

  Shovel tests were placed around the cattle pen and train car; however, no sub-surface artifacts were recovered (**Figure 15; Attachment A**). The ground surface east of the cattle pen and surrounding the railroad train car is scattered with modern trash and construction debris. Vegetation within this area consisted of mesquite trees, yucca, ragweed, tumbleweeds, medium to tall grasses, and secondary growth surrounded by a plowed field to the east. Surface visibility within this area ranged from 20 to 90 percent.

  The cattle pen was initially thought to be a potential historic site with an associated railroad train car utilized for farming storage purposes. However, aerial maps from 1953 indicate the cattle pen identified at the time of survey is not the same one identified in the 1953 aerial

(Figure 25). US 287 was once a two-lane highway that expanded to a four-lane highway sometime between 1953 to 1976. The expansion of the highway demolished the standing structure observed within the 1953 aerial map and resulted in the moving of the 1953 cattle pen. Therefore, it was concluded the cattle pen and railroad train car observed at the time of survey is within the same proximity as the once existing historic structure and cattle pen, but not the same existing structures observed in the 1953 aerial. A 1976 aerial exhibits an expanded US 287; as such the cattle pen and train car likely postdate the 1970s (Figure 26). Based on the aerial maps and surface scatter of modern debris surrounding the structures, it is likely these structures are less than 50 years of age and not historic in nature.

Continuing east, the eastern terminus of the project area consisted of a plowed cotton field used for agricultural purposes. Agricultural terraforming was present throughout the field for water retention. The area exhibited shallow clay and disturbed soils due to recurring plowing and farming activities.

In total, 71 shovel tests were excavated within the survey area, all of which were negative for cultural material (Attachment A). Shovel tests were terminated upon encountering either disturbed soils, sterile clay, or compact soil. Small to medium gravels were common within shovel tests at the west and east ends of the project terminus. No archeological materials or new archeological sites were observed or recorded as part of this survey

- **Potential Buffer Zone Description:**

  A 50-foot buffer is proposed. The landscape within 50 feet of the APE appears identical to conditions observed within the APE.

- **Archeological Materials Identified and Archeological Site Description:**

  No cultural materials were identified or collected within the APE.

Recommendations

- **Results Valid Within (check all that apply to define the buffer zone):**

No Survey Area (NSA)		Survey Area		Either	
☐	50 feet of NSA	☒	50 feet of survey area	☐	Variable, see map
☐	<0.0> feet of NSA	☐	<0.0> feet of survey area		

- **The Definition and Evaluation of this Horizontal Buffer Zone Is Based on One or More of the Following Considerations (check all that apply):**

☒	The integrity of the areas has been affected by prior development, modern land use practices, or other disturbances.
☐	These areas are unlikely locations for past human activity.
☒	The survey shows that archeological materials are unlikely to exist in this area.
☐	Other (specify)

- **Archeological Site Evaluations:**

  N/A

- **Comments on Evaluations:**

  N/A

- **Further Work:**

  The proposed project would have no effect on archeological historic properties and/or State Antiquities Landmarks within the horizontal buffer zone, as specified in the previous subsections. Any design change within this area would not require additional review or investigation. Design changes that either extend beyond the buffer zone or result in potential impacts deeper than the impacts considered in this report would require additional review. In addition, the following recommendations apply to the APE.

  No further fieldwork is recommended for the project as presently proposed.

- **Justification:**

  All work for this survey was conducted in compliance with Section 106 of the National Historic Preservation Act under the guidelines presented in 36 CFR 800, and in compliance with the Antiquities Code of Texas, whose guidelines are outlined under 12 TAC 26.

References Cited

Griffith, G. E., Bryce, S. A., Omernik, J. M., and Rogers, A. C.
2007 Ecoregions of Texas. Project Report to Texas Commission on Environmental Quality, Austin.

Texas Historical Commission (Atlas)
2020 Texas Archeological Sites Atlas Online. Electronic document, http://hall.thc.state.tx.us/, accessed March 2020.

United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS)
2020 Digital Dataset.

United States Geological Survey (USGS)
2020 Geologic Database of Texas. Digital Dataset.

Figures

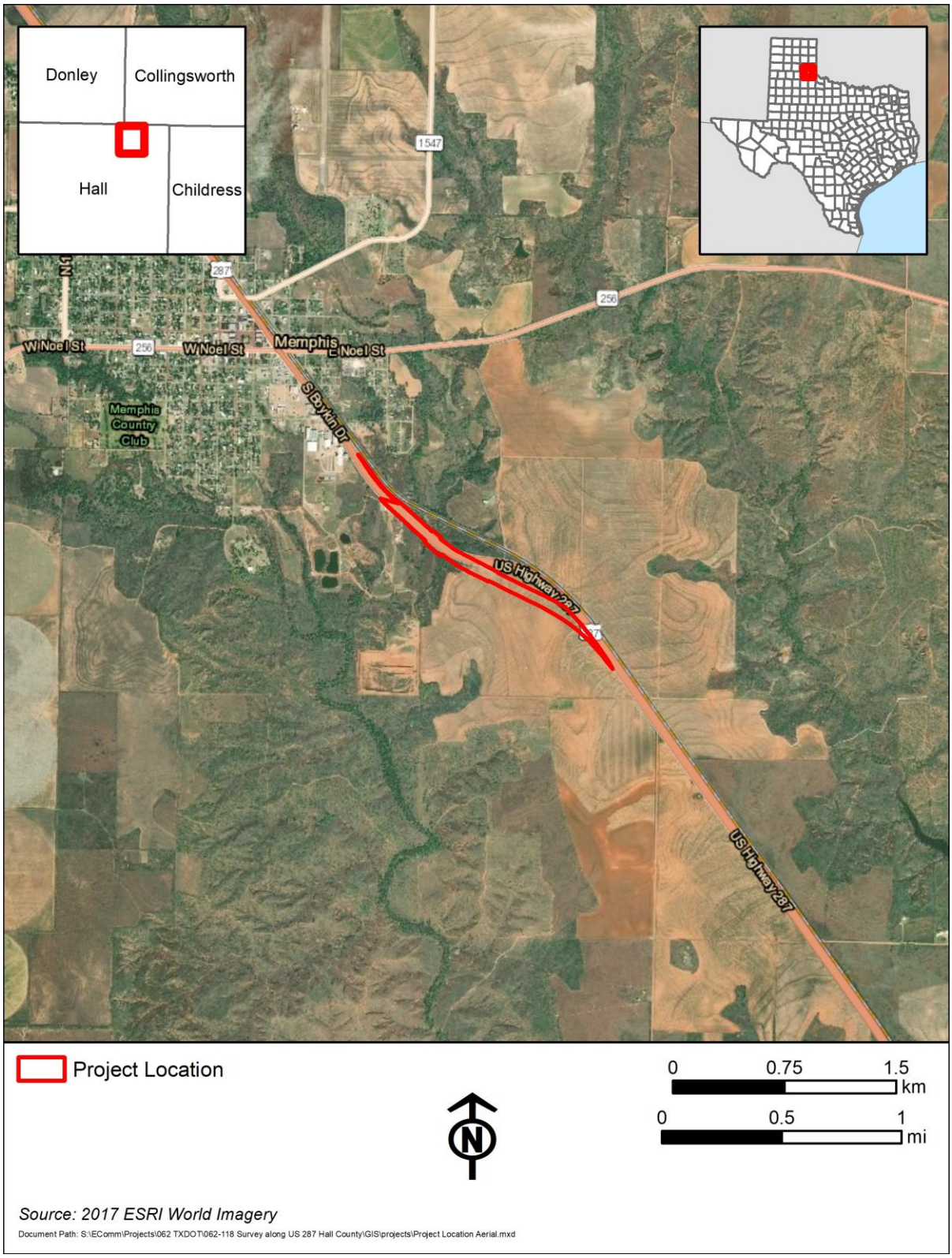

Figure 1: Project location on recent aerial imagery.

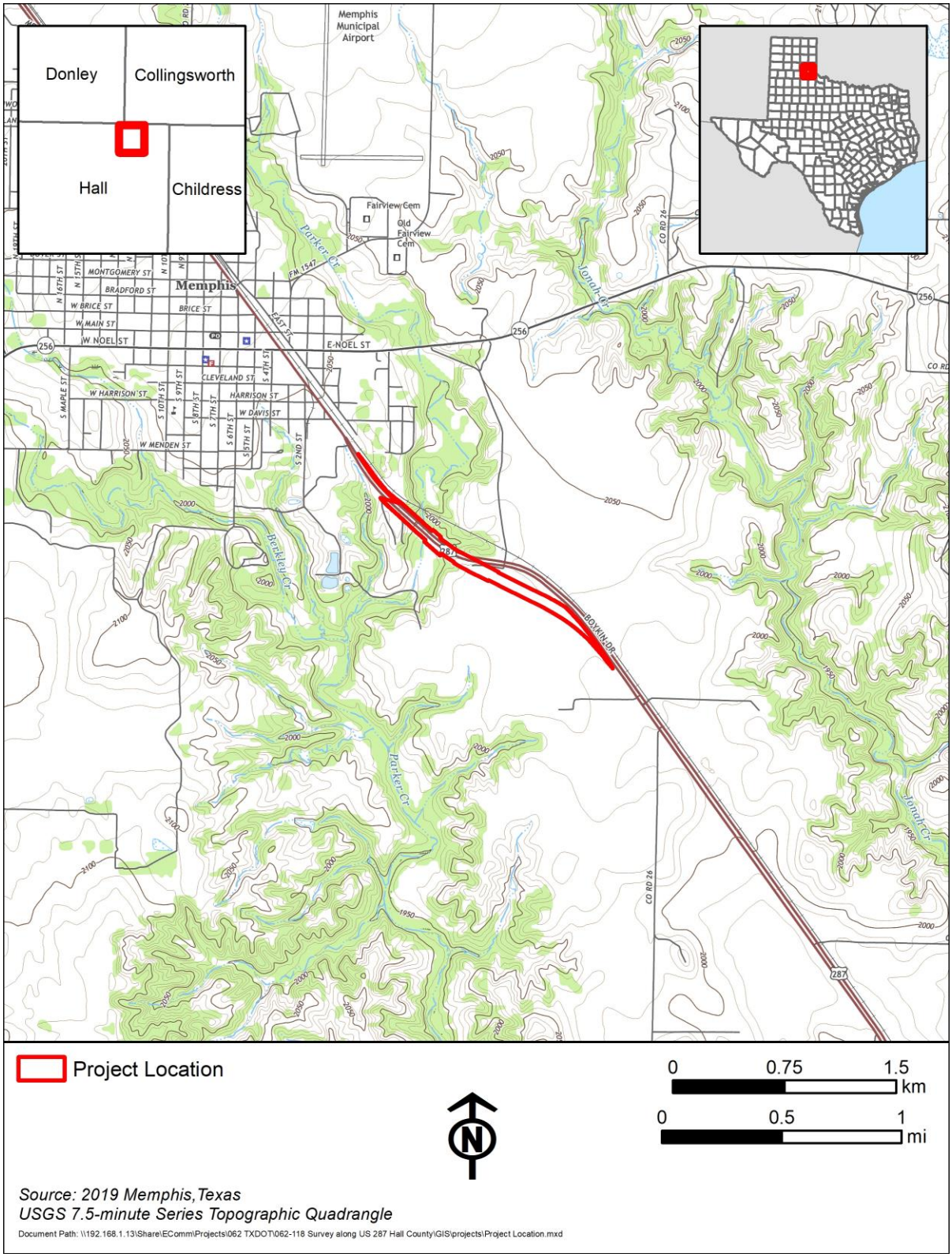

Figure 2: Project location on 2019 USGS Memphis Topographic Quadrangle map.

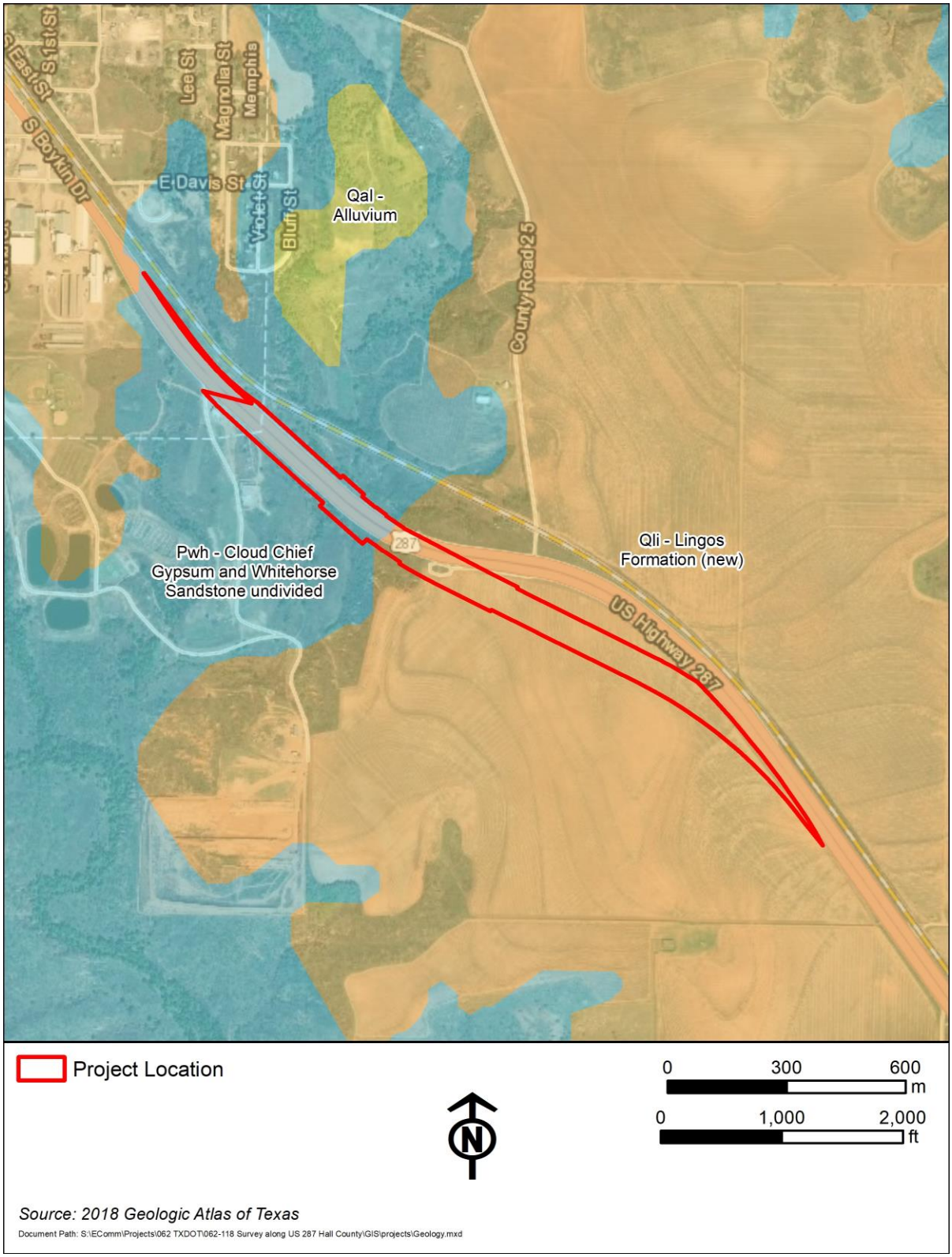

Figure 3: Mapped geology within the survey area.

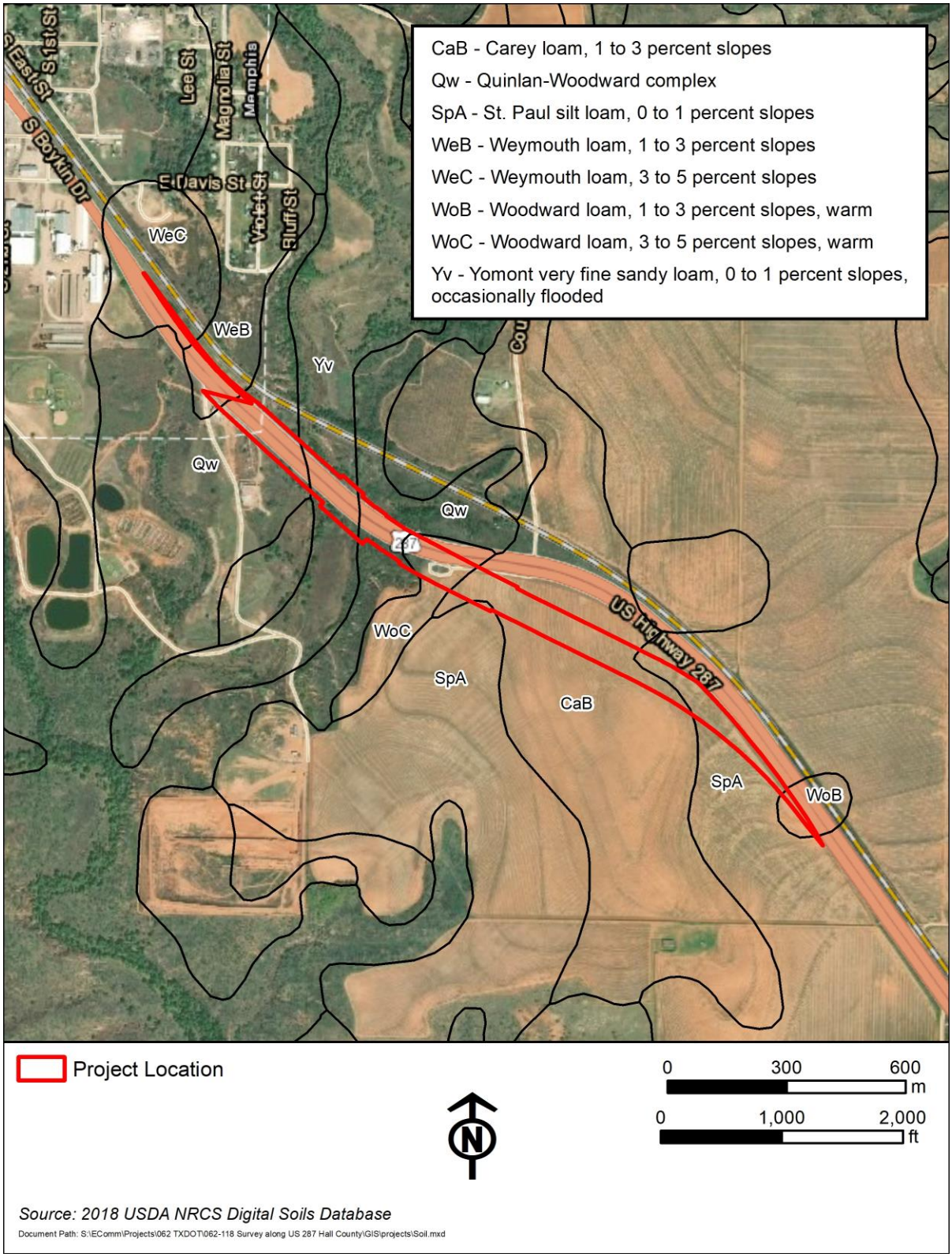

Figure 4: Mapped soil units within the survey area.

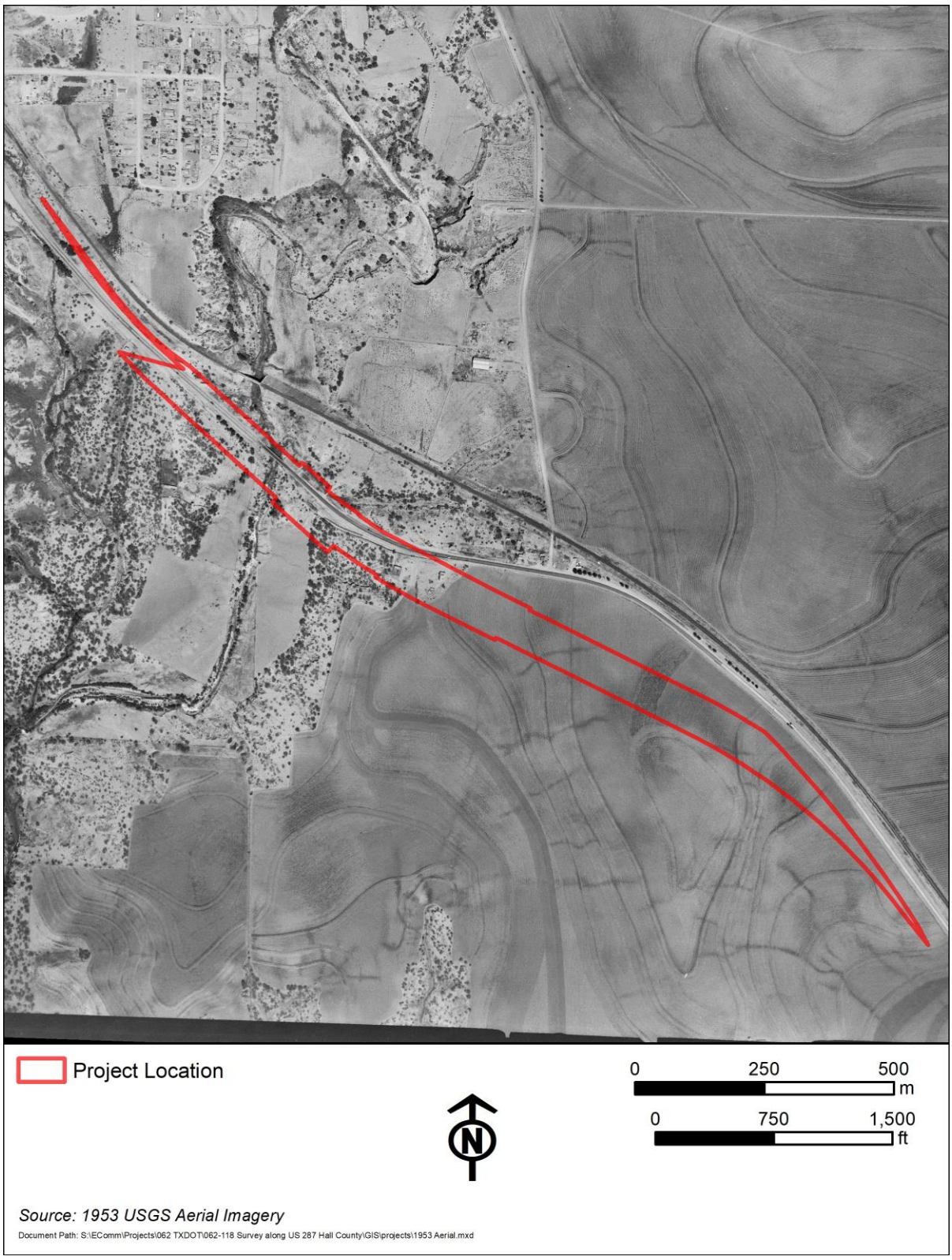

Figure 5: 1953 historic aerial image of the APE.

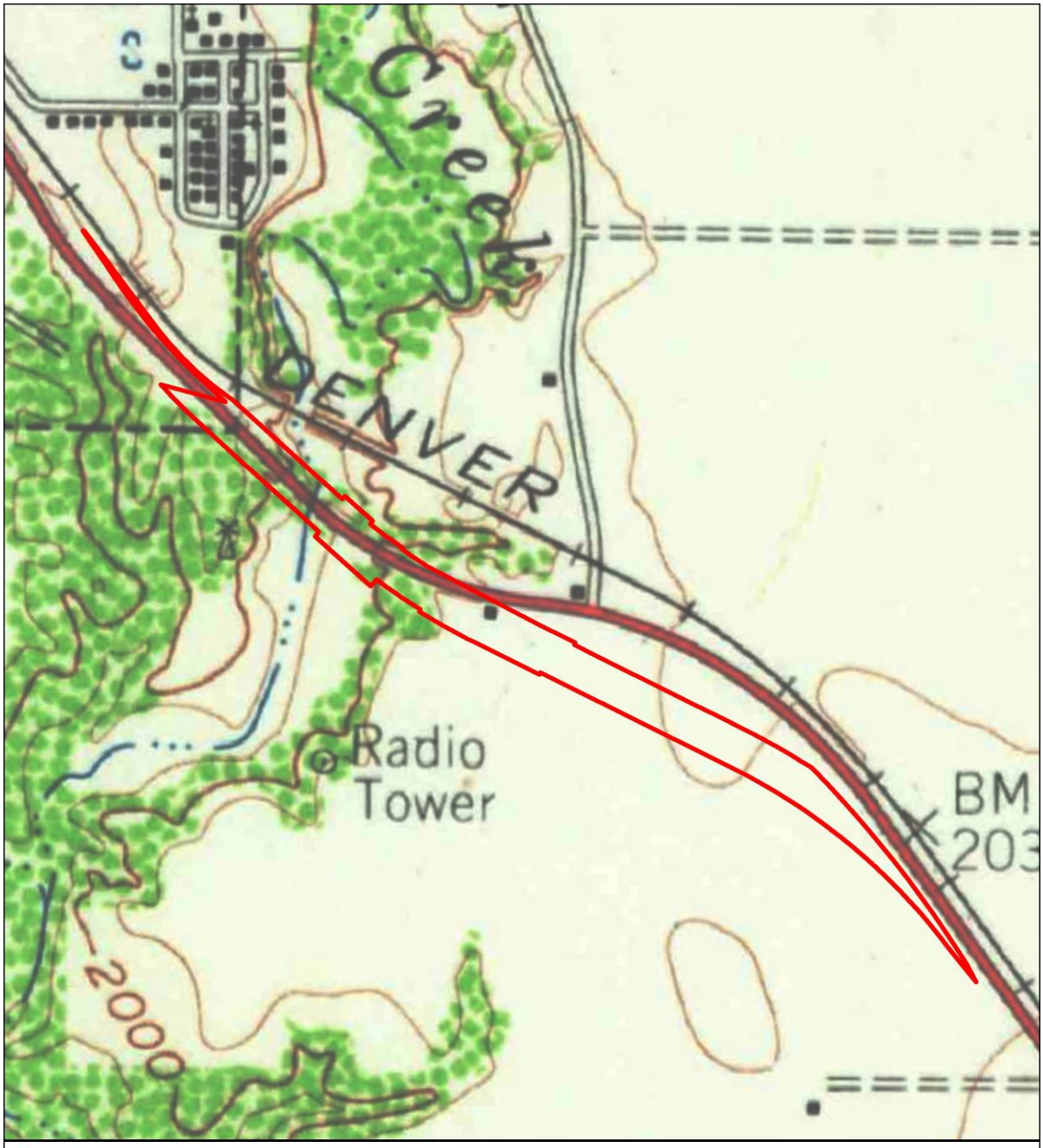

Figure 6: 1963 historic topographic map of the APE.

Figure 7: Overview of the plowed agricultural field landscape.

Figure 8: Storage and staging areas for farm equipment.

Figure 9: New ROW (left) adjacent to the current ROW (right) along US 287.

Figure 10: Vegetation at Berkley Creek.

Figure 11: Fence line separating new and existing ROW with overgrowth vegetation

Figure 12: Vegetation consisting of tall and short grasses north of US 287.

Site information has been redacted

Figure 13: THC results displaying previously recorded sites and surveys.

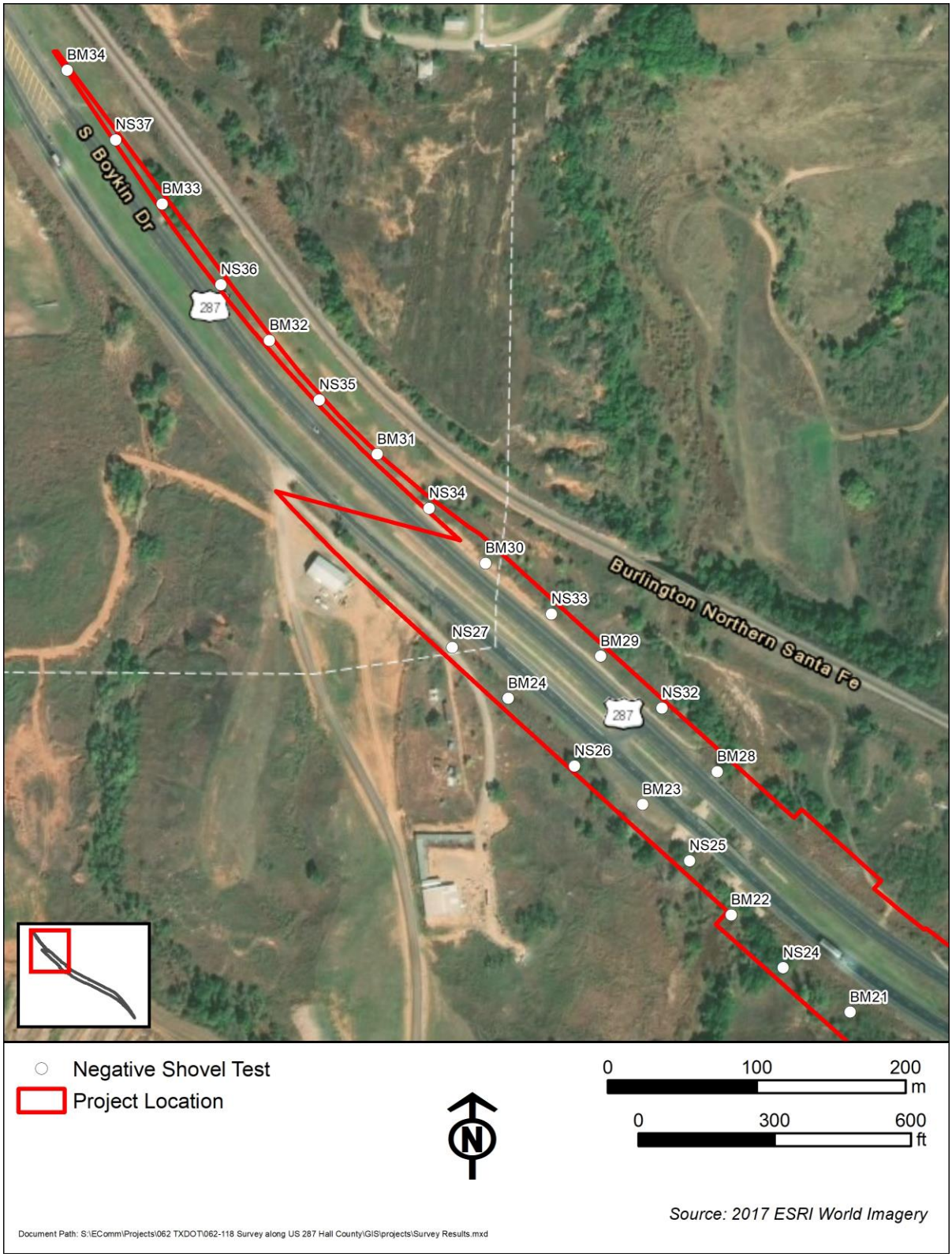

Figure 14: Survey results within the APE.

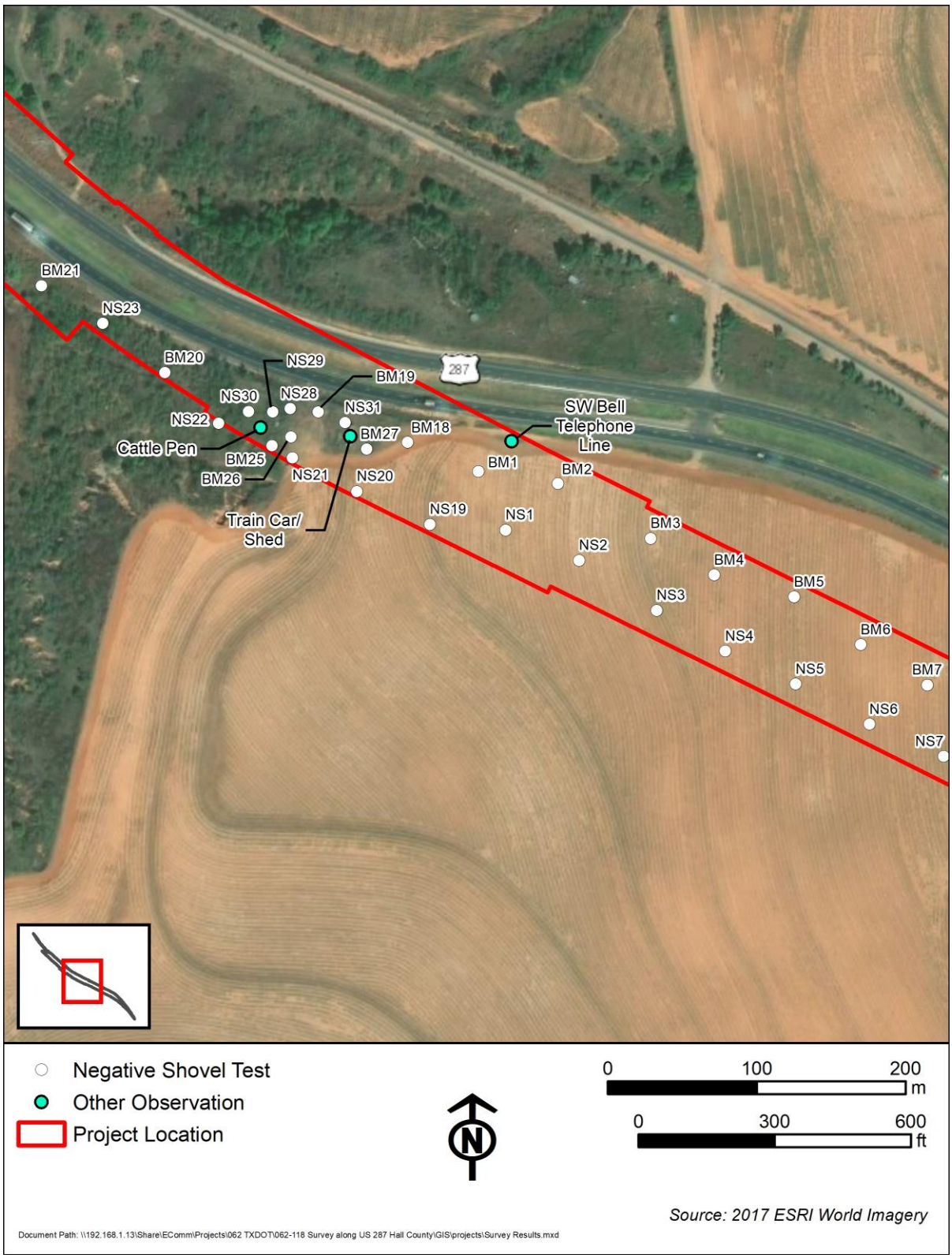

Figure 15: Survey results within the APE.

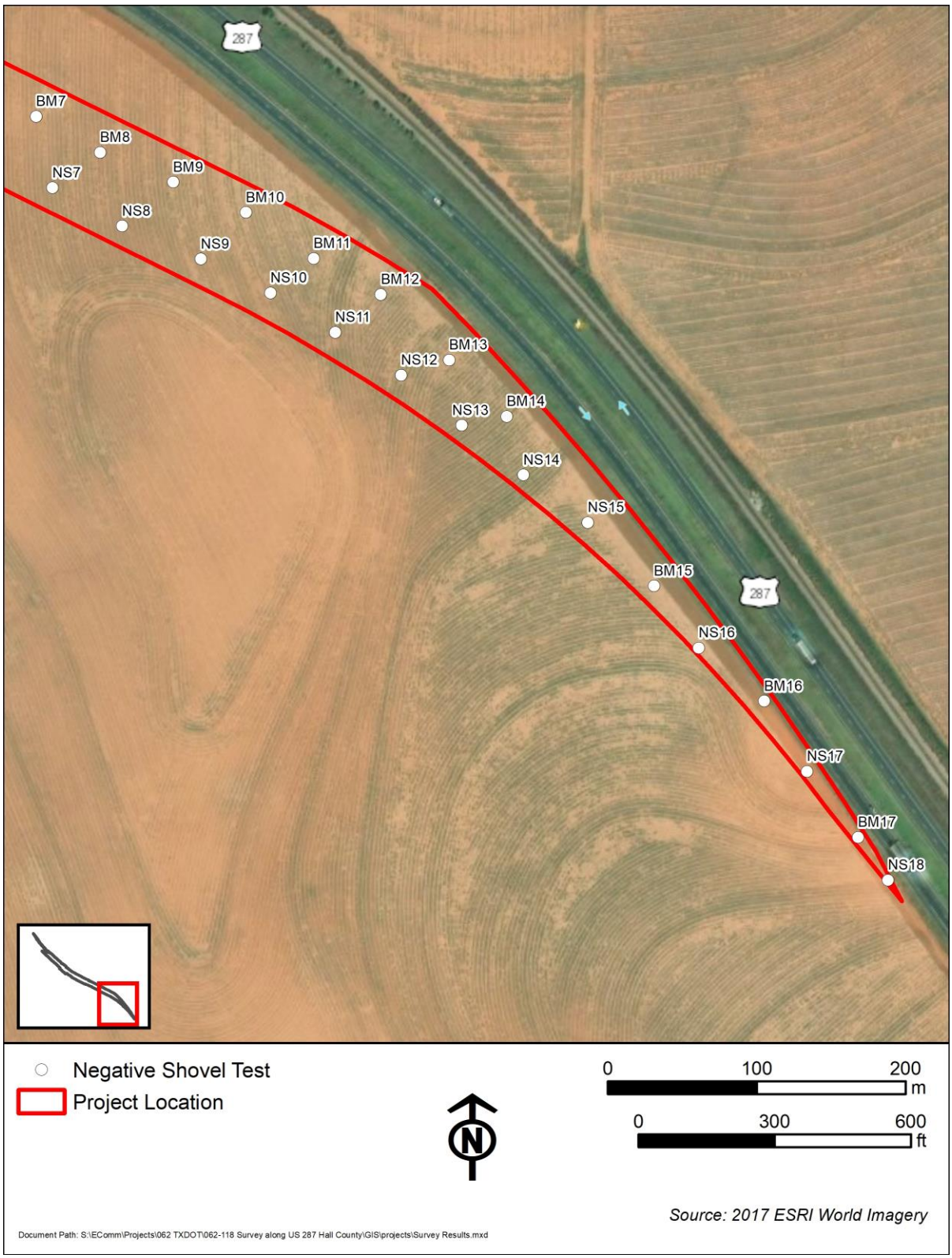

Figure 16: Survey results within the APE.

Figure 17: Concrete drainage ditch north of US 287.

Figure 18: Asphalt ground surface disturbances at the western terminus of the project area.

Figure 19: Terraforming and erosion south of US 287.

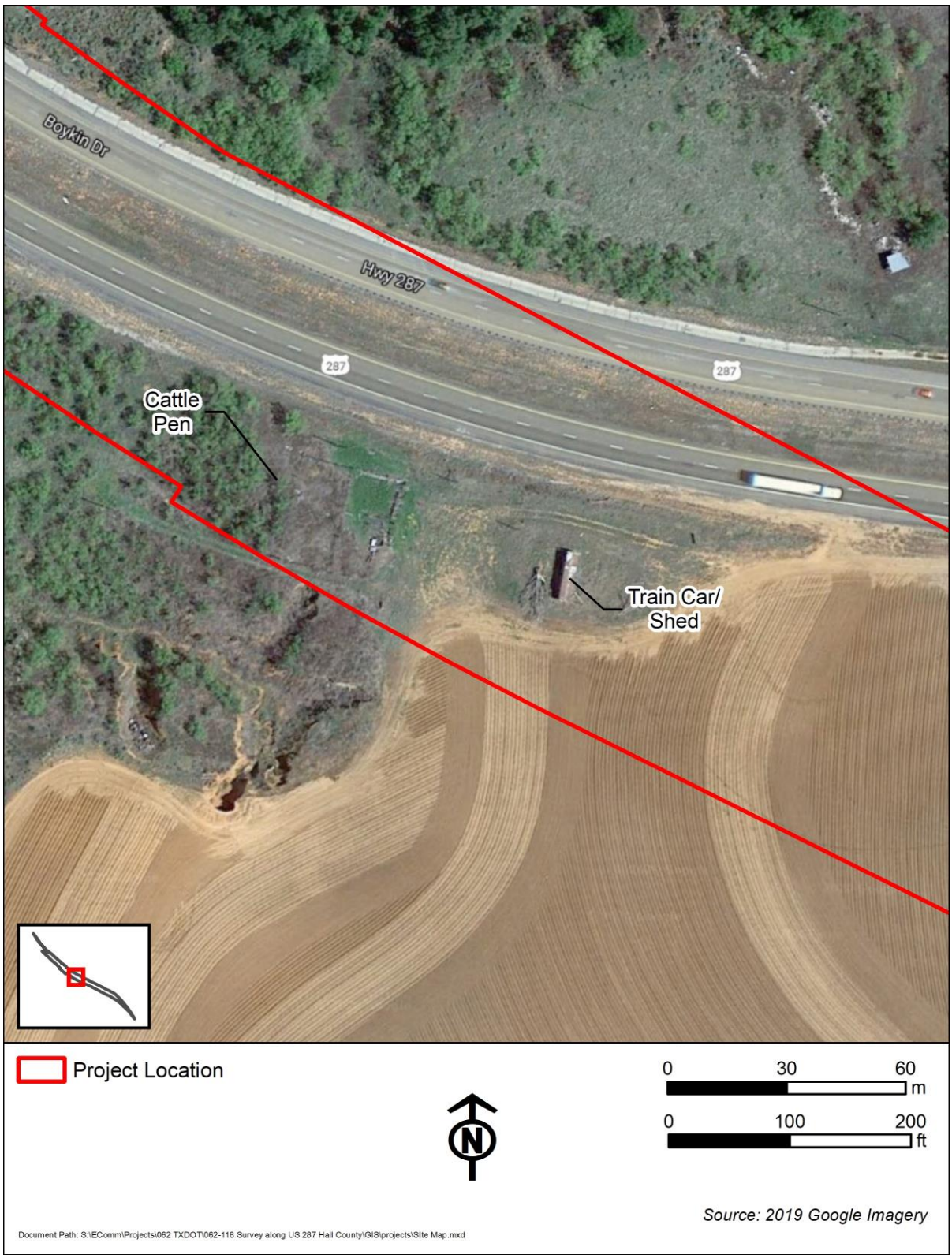

Figure 20: Cattle pen feature and associated railroad train car/shed within the APE.

Figure 21: Cattle Pen within the APE.

Figure 22: Close-up of cattle pen within the APE.

Figure 23: Railroad train car that has been converted to a storage shed.

Figure 24: Contents inside railroad train car/shed.

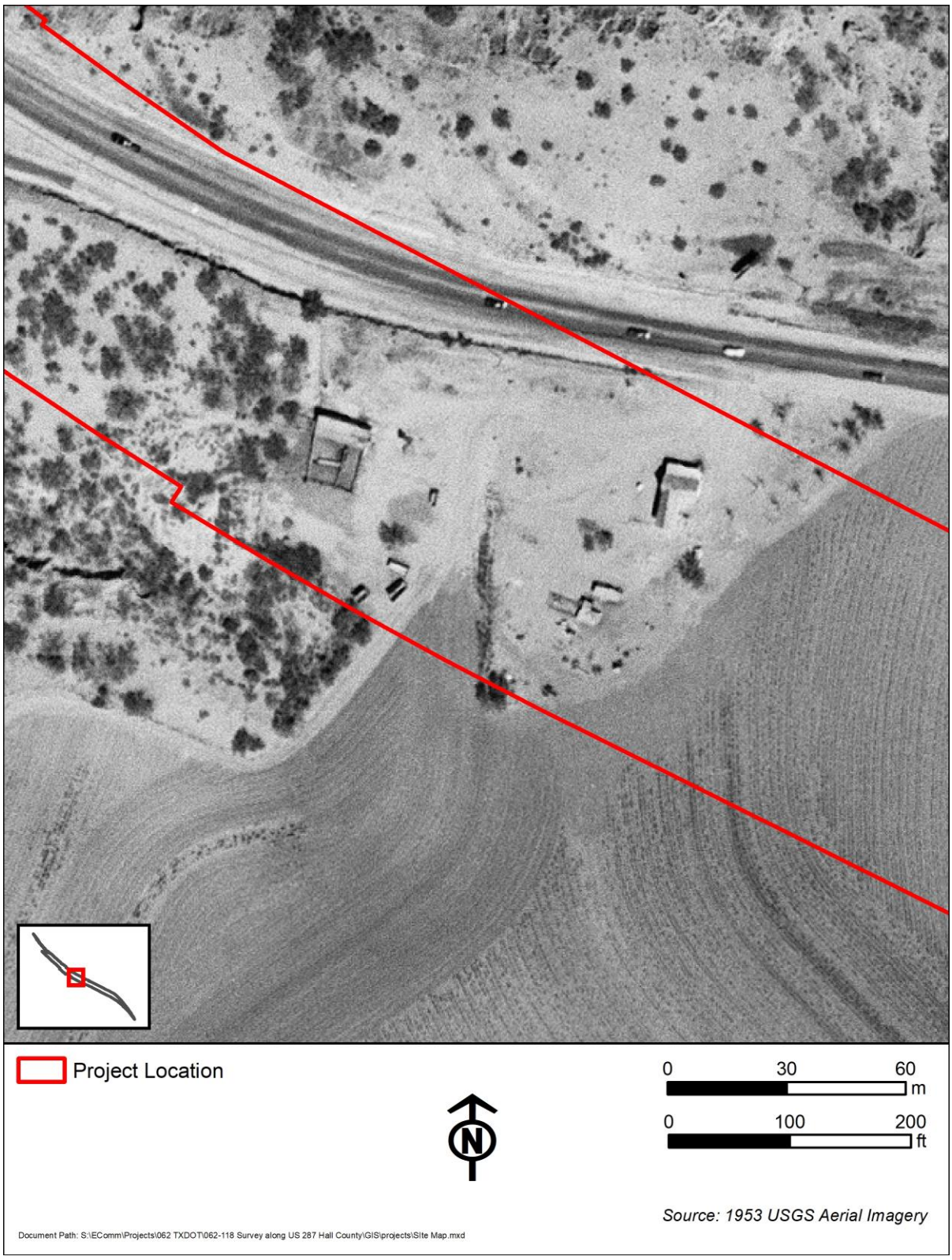

Figure 25: 1953 aerial imagery of cattle pen and previous historic structure within the APE.

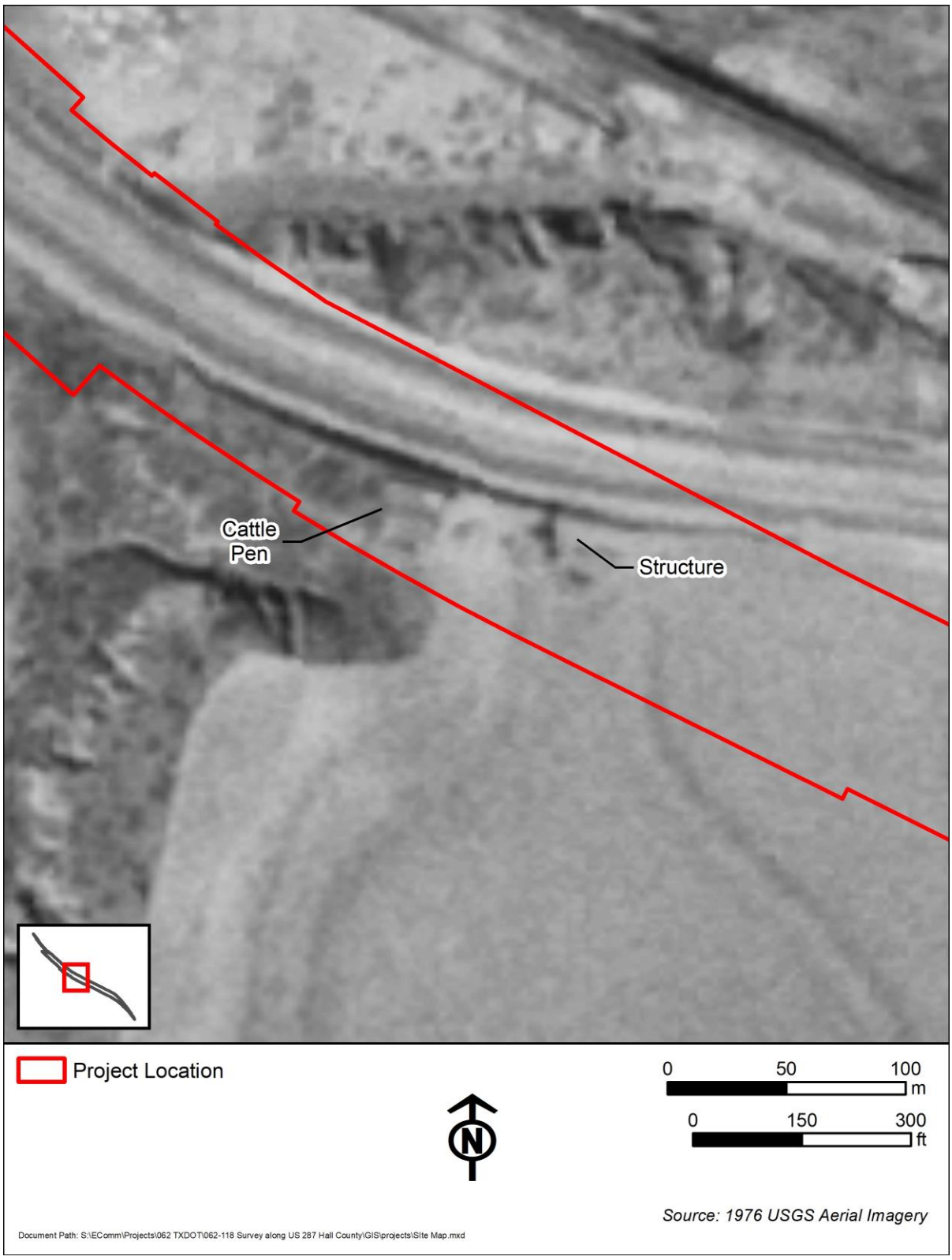

Figure 26: 1976 aerial imagery of cattle pen and possible converted railroad train car within the APE.

Attachment A

Shovel Test	+/-	Northing	Easting	Depth	Color	Texture	Disturbances	Cultural Material
NS-1	N	3842022	360919	0-30	5YR 4/4	Si Cl Lo	plowed cotton field	-
				30-40	5YR 5/8	Cl Gr		
NS-2	N	3842002	360969	0-35	5YR 4/4	Si Cl Lo	plowed cotton field	-
				35-45	5YR 5/8	Cl Gr		
NS-3	N	3841968	361021	0-30	5YR 4/4	Si Cl Lo	plowed cotton field	-
				30+	5YR 5/8	Cl Gr		
NS-4	N	3841941	361067	0-40	5YR 4/4	Si Cl Lo	plowed cotton field	-
				40+	5YR 5/8	Cl Gr		
NS-5	N	3841919	361114	0-30	5YR 6/4	Si Sa Lo	plowed cotton field	-
				30-45	5YR 4/4	Sa Cl		
				45+	5YR 5/8	Cl Gr		
NS-6	N	3841892	364464	0-40	5YR 6/4	Si Sa Lo	plowed cotton field	-
				40+	5YR 5/8	Cl Gr		
NS-7	N	3841870	364243	0-30	5YR 6/4	Si Sa Lo	plowed cotton field	-
				30-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-8	N	3841845	361260	0-30	5YR 6/4	Si Sa Lo	plowed cotton field	-
				30-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-9	N	3841823	361313	0-30	5YR 6/4	Si Sa Lo	plowed cotton field	-
				30-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-10	N	3841800	361360	0-30	5YR 6/4	Si Sa Lo	plowed cotton field	-
				30-40	5YR 4/4	Sa Cl		
				40-50	5YR 6/8	Cl Gr		
NS-11	N	3841774	361403	0-60	5YR 6/4	Si Sa Lo	on ag terrace in cotton field	-
				60+	5YR 6/8	Cl Gr		
NS-12	N	3841745	361447	0-20	5YR 6/4	Si Sa Lo	plowed cotton field	-
				20-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-13	N	361488	3841711	0-10	5YR 6/4	Si Sa Lo	plowed cotton field	-
				10-30	5YR 4/4	Sa Cl		
				30-40	5YR 6/8	Cl Gr		
NS-14	N	3841678	364529	0-10	5YR 6/4	Si Sa Lo	plowed cotton field	-
				10-30	5YR 4/4	Sa Cl		
				30-40	5YR 6/8	Cl Gr		
NS-15	N	3841646	341572	0-10	5YR 6/4	Si Sa Lo	plowed cotton field	-
				10-25	5YR 4/4	Sa Cl		
				25-35	5YR 6/8	Cl Gr		
NS-16	N	3841562	361647	0-20	5YR 6/4	Si Sa Lo	plowed cotton field	-

Shovel Test	+/-	Northing	Easting	Depth	Color	Texture	Disturbances	Cultural Material
				20-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-17	N	3841479	361719	0-30	5YR 6/8	Cl Gr	next to road, very compact still in field	-
NS-18	N	3841479	361774	0-30	5YR 6/8	Si Cl Gr	next to road, very disturbed, asphalt	-
NS-19	N	3842026	360868	0-20	5YR 6/4	Si Sa Lo	plowed cotton field	-
				20-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-20	N	3842048	360819	0-20	5YR 6/4	Si Sa Lo	near old box car, some modern trash	-
				20-40	5YR 4/4	Sa Cl		
				40+	5YR 6/8	Cl Gr		
NS-21	N	3842069	360771	0-45	5YR 4/4	Sa Cl	at edge of plow zone	-
				45+	5YR 6/8	Cl Gr		
NS-22	N	3842161	360727	0-45	5YR4/6	Si Sa Lo	next to small canyon, heavy grasses	-
				45+	5YR 6/8	Cl Gr		
NS-23	N	3842161	360649	0-60	5YR 6/4	Si Sa Lo	on opposite side of drainage from road	-
				60+	5YR 6/4	Sa Cl gr		
NS-24	N	3842209	360559	0-60	5YR 6/4	Si Sa Lo	in low grassy treed area down from road	-
				60+	5YR 6/4	Sa Cl gr		
NS-25	N	3842288	360501	0-30	5YR 6/4	inundated	flooded area under bridge	-
NS-26	N	3742351	360423	0-60	5YR 6/4	Si Sa Lo		-
				60+	5YR 6/4	Sa Cl gr		
NS-27	N	3842431	360341	0-30	5YR 6/4	disturbed	road full, buried gas line	-
NS-28	N	3842104	360775	0-40	5YR 6/4	Si Sa Lo	in animal pens	-
				40+	5YR 4/6	Cl Gr		
NS-29	N	3942101	360763	0-30	5YR 6/4	Si Sa Lo	in animal pens	-
				30-60	5YR 4/6	Cl Gr		
NS-30	N	3842102	360747	0-30	5YR 6/4	Si Sa Lo	just north of pens	-
				30-60	5YR 4/6	Cl Gr		
NS-31	N	3842092	360816	0-20	5YR 5/6	Sa Cl	next to old box car	-
				20-35	5YR 6/8	Cl Gr		
NS-32	N	3742390	360482	0-35	5YR 6/8	Si Gr	very disturbed side of road	-
NS-33	N	3842453	360407	0-35	5YR 6/8	Si Gr	very disturbed side of road	-
NS-34	N	3842524	360326	0-40	5YR 6/8	Si Gr	on rise from road	-
NS-35	N	3842597	360252	0-35	5YR 6/8	Si Gr	road gravel	-
NS-36	N	3842624	360186	0-30	5YR 6/8	Si Gr	road gravel	-
NS-37	N	3842771	360115	0-30	5YR 6/8	Si Gr	road gravel	-
BM-1	N	3842062	360901	0-35	7.5YR 4/6	Sa Si Cl	plowed field	-
BM-2	N	3842053	360955	0-40	7.5YR 4/6	Sa Si Cl	plowed field	-
BM-3	N	3842017	361017	0-50	7.5YR 4/6	Si Cl	plowed field	-
BM-4	N	3841977	361059	0-35	7.5YR 4/6	Si Cl	plowed field	-

Shovel Test	+/-	Northing	Easting	Depth	Color	Texture	Disturbances	Cultural Material
BM-5	N	3841977	361113	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-6	N	3841945	361157	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-7	N	3741918	361202	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-8	N	3841894	361246	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-9	N	3841874	361294	0-30	7.5YR 4/6	Si Cl	plowed field	-
BM-10	N	3841854	361343	0-30	7.5YR 4/6	Si Cl	plowed field	-
BM-11	N	3841823	361388	0-30	7.5YR 4/6	Si Cl	plowed field	-
BM-12	N	3841799	361434	0-35	7.5YR 4/6	Si Cl	plowed field	-
BM-13	N	3841755	361479	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-14	N	3841717	364518	0-40	7.5YR 4/6	Si Cl	plowed field	-
BM-15	N	3841603	361617	0-30	7.5YR 4/6	Si Cl	plowed field	-
				30-45	7.5YR 3/4	Si Cl		
BM-16	N	3841526	361691	0-30	7.5YR 5/6	Si Cl Gr	adjacent to plowed field	-
BM-17	N	3841435	361754	0-20	5YR 5/6	Si Cl Gr		-
				20-30	5YR 4/6	Cl Gr		
BM-18	N	3742081	360854	0-30	5YR 5/6	Si Cl	adjacent to plowed field	-
BM-19	N	3842101	360794	0-40	5YR 5/6	Si Cl	adjacent to plowed field	-
BM-20	N	3742128	360691	0-60	5YR 5/6	Si Cl	adjacent to plowed field	-
BM-21	N	3842186	360608	0-55	5YR 4/4	Si Cl	adjacent to terraformed slope	-
BM-22	N	3842251	360528	0-30	7.5YR 4/6	Si Cl	next to creek	-
BM-23	N	3842325	360469	0-30	5YR 4/4	Si Cl Gr	on sloped terraformed road	-
BM-24	N	3842690	360373	0-30	5YR 5/6	Si CL Lo	on top of hill	-
				30-50	5YR 4/6	Si Cl		
BM-25	N	3842079	360763	0-65	5YR 3/4	Si Sa Lo	south of pens	-
BM-26	N	3842085	360775	0-40	5YR 4/6	Si Cl	east of pens	-
BM-27	N	3842076	360827	0-10	5YR 4/6	Si CL Lo	east of trailer shed	-
				10-35	5YR 4/6	Si CL		
BM-28	N	3842347	360512	0-40	5YR 4/6	Si CL	on downslope from bridge	-
BM-29	N	3842425	360441	0-45	5YR 4/6	Si CL	disturbed	-
BM-30	N	3842487	360364	0-35	5YR 4/6	Si CL	disturbed	-
BM-31	N	3842560	360291	0-35	5YR 4/6	Si Cl Gr	disturbed with asphalt gravels	-
BM-32	N	3842636	360219	0-30	5YR 4/6	Si Cl Gr	disturbed with asphalt gravels	-
BM-33	N	3842728	360146	0-35	5YR 4/6	Si Cl Gr	disturbed north of road	-
BM-34	N	3842817	360083	0-30	5YR 4/6	Si Cl	disturbed north of road	-

This report was written on behalf of the Texas Department of Transportation by:

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